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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/760,315

01/21/2004

Keld Lange

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02/21/2008

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EXAMINER

BRANDT, CHRISTOPHER M

ART UNIT

PAPER NUMBER

2617

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/760,315

Applicant(s)

LANGE, KELD

Examiner

Christopher M. Brandt

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

This Action is in response to applicant's arguments filed on November 27, 2007. **Claims 1-10** are still pending in the present application. **This Action is made FINAL.**

Response to Arguments

Applicant's arguments filed November 27, 2007 have been fully considered but they are not persuasive.

The argued features, i.e., a base station including multiple radio transmission or reception portions and multiple baseband processing portions including a user data stream interface, the multiple baseband processing sections being configured in a first stage including baseband processing sections connected to radio transmission or reception sections, each radio transmission or reception section being connected to at least one baseband processing section where the multiple baseband processing sections is divided into stages, configured in said first stage and further stages, each stage including at least one baseband processing section of said multiple baseband processing sections, and each baseband processing section of the further stages is connected with at least one baseband processing unit in any preceding stage, such that the baseband processing sections are multistage-connected to the first stage of the baseband processing sections, and each baseband processing section includes adding means, dropping means, or routing means for extraction an injection of baseband data streams and, respectively routing the data streams through the stages, reads upon the cited references as follows.

Blanke is discussing baseband processing section that are further connected to other baseband processing sections. Therefore, Blanke discloses the limitation, "the plurality of

baseband processing sections is divided into stages, arranged in said first stage and further stages, each stage comprising at least one baseband processing sections." In addition, Blanke discloses that computing capacity is equalized between the computing elements of several base units of the same or different baseband boards, wherein order for this to occur the baseband processor section must be connected to preceding baseband processing units in the preceding stages. Therefore, Blanke discloses the limitation, "each baseband processing section of the further stages is connected with at least one baseband processing unit in any preceding stage, such that the baseband processing sections are multistage-connected to the first stage of the baseband processing sections."

Blanke showed baseband processing sections but fail to specifically show adding means, dropping means, or routing means for extraction and injection of baseband data streams, respectively routing the data streams through the stages and was modified by Matsuki to show that one of ordinary skill in the art would have been motivated to modify Blanke to show adding means, dropping means, or routing means for extraction and injection of baseband data streams, respectively routing the data streams through the stages.

With regard to applicant's arguments that there is no teaching or suggestion in Matsuki that "each baseband processing section comprising adding means, dropping means, and/or routing means for extraction and injection of baseband data streams and, respectively routing the data streams through the stages," the examiner respectfully disagrees. The claim as currently written can be interpreted such that the examiner is required to find "adding means or dropping means or routing means." Therefore, if the examiner finds one of these features, the claim is properly rejected. With that said, Matsuki discloses turning off (i.e. dropping means) baseband

signal producing sections (page 21 lines 4-10). Matsuki further teaches that this turns off the production (i.e. extraction of routing) of the baseband signal (page 18 lines 17-25). Therefore, Blanke in view of Matsuki teaches "each baseband processing section comprising adding means, dropping means, and/or routing means for extraction and injection of baseband data streams and, respectively routing the data streams through the stages."

With regard to applicant's argument that the invention would not have been rendered obvious in view of the combination of Blanke and Matsuki as asserted by the examiner, the examiner respectfully disagrees. The examiner did establish a prima facie case of obviousness under 35 USC 103 because one of ordinary skill in the art is aware that every base station includes an amplifier. Therefore, the examiner's rationale for the combination was proper and justified. In addition, the examiner relied on Matsuki for the motivation, which was taken strictly from the Matsuki reference (page 22 lines 12-18).

As a result, the claims are written in such a way that they read upon the cited references.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-10 are rejected under 35 USC 103(a) as being unpatentable over **Blanke (US PG PUB 2002/0141512 A1)** in view of **Matsuki (GB 2 315 622 A)**.

Consider **claim 1**. Blanke discloses a mobile communication base station apparatus comprising a plurality of radio transmissions and/or reception sections and a plurality of baseband processing sections comprising a user data stream interface (abstract, figure 1), the plurality of baseband processing sections being arranged in a first stage comprising baseband processing sections connected to radio transmission and/or reception sections (figure 2, paragraphs 10 and 13), each radio transmission and/or reception section being connected to at least one baseband processing section (paragraph 13), wherein

the plurality of baseband processing sections is divided into stages, arranged in said first stage and further stages (figure 2, paragraphs 10 and 13, read as baseband processing section that are further connected to other baseband processing sections)

each stage comprising at least one baseband processing section of said plurality of baseband processing sections (figure 2, paragraphs 10 and 13-14, read as baseband processing section that are further connected to other baseband processing sections), and

each baseband processing section of the further stages is connected with at least one baseband processing unit in any preceding stage, such that the baseband processing sections are multistage-connected to the first stage of the baseband processing sections (figure 2, paragraphs 10 and 13-14, read as baseband processing section that are further connected to other baseband

processing sections. Blanke also discloses that computing capacity is equalized between the computing elements of several base units of the same or different baseband boards. In order for this to occur the baseband processor section must be connected to preceding baseband processing units in the preceding stages).

Blanke substantially discloses the claimed invention but fails to explicitly teach that each baseband processing section comprises adding means, dropping means, and/or routing means for extraction and injection of baseband data streams and, respectively routing the data streams through the stages.

Matsuki discloses that each baseband processing section comprises adding means, dropping means, and/or routing means for extraction and injection of baseband data streams and, respectively routing the data streams through the stages (page 21 line 4 – page 22 line 18, read as increasing the outputs of the baseband signal producing sections, turning off the outputs of the n baseband signal producing sections and a distributing circuit).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Matsuki into the invention of Blanke in order to compensate for the failure of an amplifier in a transmitter by increasing the base band signal (page 21 line 4 – page 22 line 18).

Consider **claim 8**. Blanke discloses a baseband processing section for use in a mobile communication base station apparatus, said baseband processing section comprising an interface for user data streams (abstract), wherein said baseband processing section comprises baseband-processing-section-to-baseband process section interface for data streams transmitted and/or received between the baseband processing section and one other baseband processing section

(figure 2, paragraphs 10 and 13-14, read as baseband processing section that are further connected to other baseband processing sections).

Blanke substantially discloses the claimed invention but fails to explicitly teach adding means for injecting additional data streams to received data stream, dropping means for extracting data streams from received data streams, and routing means for passing resulting data streams over said baseband-processing-section-to-baseband process section interface.

Matsuki discloses adding means for injecting additional data streams to received data stream, dropping means for extracting data streams from received data streams, and routing means for passing resulting data streams over said baseband-processing-section-to-baseband process section interface (page 21 line 4 – page 22 line 18, read as increasing the outputs of the baseband signal producing sections, turning off the outputs of the n baseband signal producing sections and a distributing circuit).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Matsuki into the invention of Blanke in order to compensate for the failure of an amplifier in a transmitter by increasing the base band signal (page 21 line 4 – page 22 line 18).

Consider **claims 2 and 9 and as applied to claims 1 and 8, respectively**. Blanke as modified by Matsuki disclose that the base station is W-CDMA NODE-B System and the adding and dropping means control the spreading and de-spreading according to code division multiple access (Blanke; figures 1 and 2, abstract, paragraph 29, Matsuki; page 14 lines 11-21).

Consider **claim 3 and as applied to claim 1**. Blanke and Matsuki disclose that the transmission and/or reception sections are decomposed into receiver modules and transmitter modules (Blanke; figure 2, paragraph 29).

Consider **claim 4 and as applied to claim 1**. Blanke as modified by Matsuki disclose that the baseband processing sections within one stage are interconnected (Blanke; figure 2 paragraphs 1 and 28).

Consider **claim 5 and as applied to claim 1**. Blanke and Matsuki disclose that the stage configuration is a matrix configuration and the number of baseband processing sections in the stages of the baseband processing sections is constant (Blank; figure 2, paragraphs 1 and 28, the load on the baseband processing unit is equalized among the existing processing sections).

Consider **claim 6 and as applied to claim 1**. Blanke as modified by Matsuki disclose that the routing means support load balancing on said interfaces by using corresponding interface connections (Blanke; paragraph 16).

Consider **claim 6 and as applied to claim 1**. Blanke and Matsuki disclose that the apparatus comprises detection means for detecting baseband processing sections and said routing means supports fault tolerance by using routing paths avoiding said defect baseband process sections (Blank; paragraph 17).

Consider **claim 10 and as applied to claim 8**. Blanke as modified by Matsuki discloses that baseband processing section comprises baseband-processing-section-to-transmission-and/or-reception-sections-interface for data streams transmitted and/or received between the baseband processing section and transmission and/or reception sections (Blanke; figures 1 and 2, Matsuki; page 13 lines 1-26).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street

Alexandria, VA 22314

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Brandt whose telephone number is (571) 270-1098.

The examiner can normally be reached on 7:30a.m. to 5p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.



Christopher M. Brandt

C.M.B./cmb

February 10, 2008



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